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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/074,019	02/14/2002	Ken Cameron	032658-023	5665

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EXAMINER	
BILGRAMI, ASGHAR H	
ART UNIT	PAPER NUMBER
2143	

NOTIFICATION DATE	DELIVERY MODE
03/14/2008	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

tammy@ppglaw.com

Office Action Summary	Application No.	Applicant(s)	
	10/074,019	CAMERON, KEN	
	Examiner	Art Unit	
	ASGHAR BILGRAMI	2143	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *31 October 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1- 9 & 11-15* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1- 9 & 11-15* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *14 February 2002* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 10/31/2007 has been entered.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 1- 9 & 11-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chang et al (U.S. 6,338,078).

4. As per claims 1, 5 & 8 Chang disclosed a processing system comprising a plurality of processing engines for processing datagrams in a predetermined order, each processing engine comprising at least one input port, at least one output port and a

plurality of processing elements, each processing element comprising an input port connected to the at least one input port of the processing engine, an output port connected to the at least one output port of the processing engine (col.5, lines 8-25) and arithmetic and logic means, and a ticket dispenser adapted to associate a ticket with each incoming datagram (col.5, lines 66-67 & col.6,lines 1-32) and the processing elements, once the processing element becomes available, to take a next available ticket from the ticket dispenser (col.6, lines 33-50, 66-67 & col.7, lines 1-5), the order of processing datagrams being controlled at the at least one input port of the processing engine and at the least one output port of the processing engine in dependence on a said ticket associated with the datagram or a group of the datagrams (col.5, lines 66-67, col.6, lines 1-50). Although Chang did not explicitly disclose a ticket dispenser adopted to associate a ticket with each incoming datagram. However Chang disclosed a queuing mechanism for queuing the packets (datagrams) in a such a way that packets arrive at the device driver in a certain sequence and are then aligned in sequence to be processed by multiple processors (Figure.3, col.5, lines 8-26, lines 66-67, col.6, lines 1-32).

It would have been obvious to one in the ordinary skill in the art at the time the invention was made to have incorporated the use of queuing mechanism instead of ticket dispenser to align packets in a certain sequence before being processed by multiple processors in order to make the processing of the packets more efficient resulting in a more robust packet processing system.

5. As per claim 2 Chang disclosed a method according to claim 1, wherein the order of the datagrams or group of datagrams at the at least one input port corresponds to the order of the datagrams at the at least one output port (col.5, lines 66-67, col.6, lines 1-50).

6. As per claim 3 Chang disclosed a method according to claim 1, wherein the tickets comprise numerical values (col.5, lines 66-67, col.6, lines 1-50).

7. As per claim 4 Chang disclosed a method according to claim 1, wherein the ticket comprises a semaphore with data associated therewith (col.5, lines 66-67, col.6, lines 1-50).

8. As per claim 6 Chang disclosed a processing engine according to claim 5, wherein the processing element comprises an element of a multi threaded array processing engine (col.5, lines 1-26)

9. As per claim 7 Chang disclosed a processing engine according to claim 5, wherein the processing element can leave or enter the predetermined order (col.5, lines 66-67 & col.6, lines 1-32).

10. As per claim 10 Chang disclosed a processing system according to claim 8 further comprising a ticket dispense for giving tickets to a datagram or group of datagrams (col.5, lines 66-67 & col.6, lines 1-50).

11. As per claim 11 Chang disclosed a processing system according to claim 10, wherein the tickets are issued on a first come first served basis ((col.5, lines 1-26, lines 66-67 & col.6, lines 1-50).

12. As per claim 12 Chang disclosed a processing system according to claim 8 further comprising a counter for maintaining the value of the current ticket (col.5, lines 66-67 & col.6, lines 1-50).

13. As per claim 13 Chang disclosed a processing system according to claim 12, wherein the counter comprises storage means for storing a numerical value (col.5, lines 66-67 & col.6, lines 1-50).

14. As per claim 14 Chang disclosed a processing system according to claim 13, wherein once a processing element is allocated a datagram or group of datagrams for processing, the counter is incremented (col.5, lines 66-67 & col.6, lines 1-50).

15. As per claim 15 Chang disclosed the method of claim 1, wherein a number of tickets is at least equal to a total number of processors (col.5, lines 14-17).

Response to Arguments

16. Applicant's arguments filed 10/31/2007 have been fully considered but they are not persuasive.

17. Examiner is giving a first action final because the applicant did not amend the claim language and merely presented the same claims that were rejected in a final office action dated 5/17/2007.

18. Applicant's representative mentioned he contacted examiner's supervisor to instruct the examiner to grant interview to the undersigned.

19. For future reference examiner advises the applicant's representative to directly contact the examiner if he needs an interview instead of examiner's supervisor. If applicant's representative needs an interview in the future he can contact the examiner to schedule a date for interview and submit an agenda specifying what needs to be discussed in that interview.

20. On the last paragraph page 7 applicant argued that Chang fails to disclose a ticket dispenser which causes each CPU to scan all the queues to find the next packet.

21. Examiner respectfully disagrees with applicant's erroneous interpretation of the ticket dispenser. All the "ticket dispenser" is doing is sequencing/aligning the packet/datagram in a queue so that it can be processed by a processor. Page.9 of applicant's specification states:

> The number N of tickets is determined by the number of processors that can be concurrently processing datagrams. The only requirement is that N is at least as large as the number of processors. The method preserves order of the datagrams. That is, the datagrams are delivered to the output sink in the order they were taken from the input source. To see this, note that initially exactly

Although Chang did not explicitly disclose a ticket dispenser adopted to associate a ticket with each incoming datagram. However Chang disclosed a queuing mechanism for queuing the packets (datagrams) in queues in a such a way that packets arrive at the device driver in a certain sequence and are then aligned in sequence to be processed by multiple processors (Figure.3, col.5, lines 8-26, lines 66-67, col.6, lines 1-32).

It would have been obvious to one in the ordinary skill in the art at the time the invention was made to have incorporated the use of queuing mechanism instead of ticket dispenser to align packets in a certain sequence before being processed by multiple processors in order to make the processing of the packets more efficient resulting in a more robust packet processing system.

22. Applicant argued that the claim language suggest that the processor takes the next available packet where as in Chang the processors are given the next packet.

As to applicant's argument the claim language does not specifically indicate that the processor initiates in taking the packet. Examiner advises the applicant to formulate arguments in light of the presented claim language.

23. Applicant is again advised to incorporate the unique details regarding the functionalities & techniques described in the specification of this invention that come into play in controlling the order of datagrams into the independent claims. The current claim language is still broad and incorporating unique details into the claim language will be beneficial in overcoming the art. Applicant also has the option to file an Appeal brief before the BPAI.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ASGHAR BILGRAMI whose telephone number is (571)272-3907. The examiner can normally be reached on 9-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nathan J. Flynn can be reached on 571-272-1915. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

AB

/Nathan J. Flynn/

Supervisory Patent Examiner, Art Unit 2154